

Patent Claims

1. An optical device, in which a dispersive element and an imaging optic define a cleavage plane, in which each light wavelength is assigned a location and in which a microstructured element is positioned, which deflects light beams, which come from different directions and are focused on locations corresponding to their wavelength, via the imaging optic to the dispersive element, which collinearly unites the light beams.
2. The optical device according to Claim 1, characterized in that the light beams have different wavelengths.
3. The optical device according to one of Claims 1 or 2, characterized in that at least one light beam has multiple wavelengths.
4. The optical device according to one of Claims 1 through 3, characterized in that the dispersive element spectrally cleaves at least one light beam spatially before the incidence on the microstructured element.
5. The optical device according to one of Claims 1 through 4, characterized in that at least one further dispersive element spectrally cleaves at least one light beam spatially before the incidence on the microstructured element.
6. The optical device according to one of Claims 1 through 5, characterized in that the dispersive element contains a prism.
7. The optical device according to one of Claims 1 through 5, characterized in that the dispersive element contains a grating.
8. The optical device according to one of Claims 1 through 7, characterized in that the dispersive element comprises the imaging optic.

9. The optical device according to one of Claims 1 through 8, characterized in that the microstructured element has reflecting and transmitting areas.
10. The optical device according to one of Claims 1 through 9, characterized in that the microstructured element has mirrored surfaces of different inclinations.
11. The optical device according to one of Claims 1 through 10, characterized in that the microstructured element contains MEMS (micro-electromechanical systems) and/or MOEMS (micro-optoelectromechanical systems).
12. The optical device according to one of Claims 1 through 11, characterized in that the microstructured element contains a micromirror array.
13. The optical device according to one of Claims 1 through 12, characterized in that the microstructured element contains a microprism array.
14. The optical device according to one of Claims 1 through 12, characterized in that the microstructured element has areas having different indices of refraction.
15. A microscope having an optical device according to one of Claims 1 through 14.
16. A scanning microscope, particularly a confocal scanning microscope, having an optical device according to one of Claims 1 through 14 for generating an illumination light beam.